Platelet lymphocyte ratio as a diagnostic marker in pancreatic malignancy

Abstract:

Pancreatic cancer is the eighth most common cause of cancer related deaths worldwide. Pancreatic cancer has an overall poor prognosis – the 1 and 5 year survival rate for all stages combined are 25% and 6% respectively. Hence early diagnosis is very crucial. CA 19-9 is a carbohydrate antigen which is the best accepted marker for prognostication and diagnosis of pancreatic cancer. Platelet lymphocyte ratio (PLR) as a tumour marker has been found to have a role in prognostication of pancreatic cancer. But its use as a diagnostic marker has not been extensively studied. The aim of the study is to assess the demographics of pancreatic malignancy in our hospital and to assess the role of PLR and CA 19-9 as a diagnostic marker in pancreatic malignancy.

Aims and Objectives :

1. To asses the demographics of histologically proven pancreatic malignancy in our hospital.

2.To assess the role of Platelet lymphocyte ratio and CA 19-9 in the diagnosis and management of pancreatic malignancy.

Study design :

Cross sectional study.

Inclusion criteria :

1.All patients admitted with impression of pancreatic malignancy indicated by imaging (pancreatic mass on USG abdomen/ CECT abdomen) and with/without clinical features of malignancy such as jaundice, abdominal mass, pruritis.

Exclusion criteria :

1. Patients with clinical of biochemical features of cholangitis.

2. Patients in whom histopathological confirmation was not available.

Methodology :

Cross sectional study for the period Nov 2013 to Nov 2014 was done in Govt. Stanley Hospital. The patients admitted in Govt. Stanley hospital during this period were included.

Method of collection of data :

Details of the patients, detailed history, clinical examination, symptoms and signs of pancreatic malignancy were recorded.

Parameters taken into account were :

Jaundice

Loss of weight(>10% of body wt in the last six months or less)

Previous history of pancreatitis

Alcohol intake (equal to or more than 80g of ethanol per day for 5 years was considered significant)

Patients admitted with features of pancreatic malignancy were subjected to the following investigations:

Blood:

- Complete blood count
- Liver function test (SGOT, SGPT, ALP, S.Bilirubin)
- CA19-9 (normal value < 39 U)
- PLR (cut off at 150)

The following imaging investigations were done:

- Ultrasound (transabdominal)
- Doppler USG (where indicated)
- CECT abdomen (pancreas protocol CT)
- MRI/MRCP (where indicated)

Other investigations

Esophagogastroduodenal scopy – end or side viewing scopy.

ERCP (where indicated)

FNAC – USG or CT guided.

Statistical methods :

Derivations from continuous measurements were presented on mean +/- standard deviation, and from categorical measurements were presented in number (%).

Significance – 5% level of significance.

Significance on parameters on continuous scale – student t test was usedand for intergroup analysis chi squared test was used.

Diagnostic statistics such as sensitivity, specificity, ppv, npv were calculated for CA 19-9 and PLR . Statistical software – XLSTAT and Socialstatistics.com were used.

KEYWORDS :

Pancreatic malignancy

Platelet lymphocyte ratio

CA19-9/ PLR